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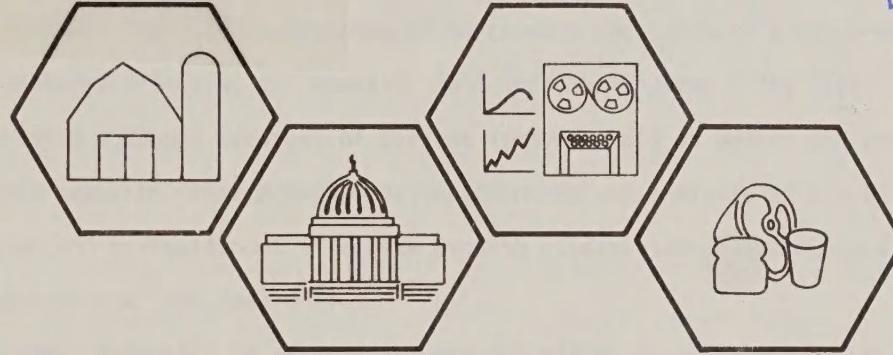
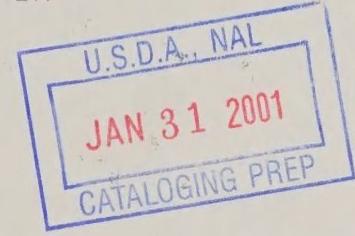


# Agricultural Policy Analysis Program Area

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## THE AGRICULTURAL POLICY ANALYSIS PROGRAM AREA

### --A DESCRIPTIVE OVERVIEW--



### POLICY BACKGROUND PAPER

January 1977

Prepared by the Staff

AGRICULTURAL POLICY ANALYSIS  
PROGRAM AREA

COMMODITY ECONOMICS DIVISION  
ECONOMIC RESEARCH SERVICE  
U.S. DEPARTMENT OF AGRICULTURE  
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Policy Background Papers are prepared to facilitate understanding of specific subjects related to Agricultural and Food Policies and Programs. They are not official statements of ERS or the Department of Agriculture.



## THE AGRICULTURAL POLICY ANALYSIS PROGRAM AREA

### --A DESCRIPTIVE OVERVIEW--

#### INTRODUCTION

The Agricultural Policy Analysis (APA) Program Area provides analytical support for agencies of the executive and legislative branches of Government and conducts a broad program of definitive research on policies affecting the domestic food and fiber system. The staff support function involves providing economic analyses of current issues to aid in policy and program decisions. The longer-term research program emphasizes development and analysis of new policy concepts, and formulation and evaluation of effective program alternatives. The subject area focus is commercial agricultural and food policy.

APA provides leadership in identifying and describing major policy issues. It performs a coordinating and integrating role in assimilating basic data and economic intelligence required for policy analyses. Research conducted by APA is closely coordinated with work in the commodity program and some functional areas. Research results and professional expertise are drawn from across the Economic Research Service (ERS) and sources outside the Agency. APA further serves as a focal point in evaluating the economic impact of alternative policies and program effects tracing from the international or domestic economy through the food and fiber system to the individual commodity sectors. Major economic variables treated include commodity production, utilization, and prices, producer incomes, resource use, rates of return, food prices, structural change, Treasury costs, distributional impacts, etc.

APA was created as a result of the reorganization of ERS in mid-1973. The reorganization was aimed primarily toward more effectively mobilizing the Agency's research resources to better analyze the functioning and performance of the food and fiber system. The focal emphasis was broadened to enhance and facilitate research treating the components of the food and fiber system in concert rather than studying individual sectors of the system independently.

## ORGANIZATION

The context in which to view the setting of APA in the Division, Agency, and Departmental structure is provided by the organizational charts for USDA, ERS, and the Commodity Economics Division (CED), (Exhibits A, B, and C). Within CED (Exhibit C), APA reports to the Office of the Associate Director, as does the Outlook and Situation Coordinator and the Forecast Support Staff. These three activities are grouped and relate to one another in that their functions involve treatment of across-commodity relationships.

The major staff, research, and service activities are functionally integrated in the Program Area as depicted in Exhibit D. The most immediate and visible function of APA is the staff activity--primarily as input into the policy formulation and evaluation process. The clientele for staff analyses is specific and relatively few in number. The foundation activity of the Program Area is the long-term research program of APA and the Division which provides the economic intelligence base upon which the staff analysts primarily draw. The methods and procedures project is an internal entity, somewhat distinct in that it facilitates both the research and staff activities through development of quantitative analytical constructs and provision of on-line access to computerized models and data.

A major service activity of the Program Area is coordinating ERS's commodity cost of production measurement and research. The Agriculture and Consumer Protection Act of 1973 mandated that production costs be determined for major agricultural commodities, and this is done for specific commodity groups using special surveys on a four-year rotation schedule. The Congressional mandate is satisfied in the interim years with cost estimates from the Firm Enterprise Data System (FEDS). FEDS is a computerized budget system treating major and specialized crops in all production regions (highly disaggregated) of the U.S. Currently, the system contains approximately 1,500 crop and livestock budgets. Additionally, a series of 50 "typical" or representative farms is being developed. The first 20, now nearing completion, are linked to FEDS (for current enterprise budgets) and a whole farm simulator for determining enterprise mix and production levels.

## ROLE OF APA

The interdependence within and among economic units (firms, sectors, systems, and economies) and the frequent broad scope of policies and their attendant programs provide a logical role for a policy group within ERS. The role of APA thus encompasses the functions of:

- (1) Integration--assimilating and interrelating the base research intelligence available from across ERS and identifying and mobilizing specific professional expertise to focus upon the across-commodity, function, sector, and system problems.
- (2) Coordination--to facilitate the staff research activities in making available timely and rigorous analytical results of economic policy problems.
- (3) Cooperation--to lend our expertise and resources, when we are not the lead group, to other organizational units treating policy-related issues.
- (4) Analyses--the limited personnel resources are devoted to identifying and undertaking broad or policy-specific research efforts not treated elsewhere in ERS but necessary to policy analyses.

The integration function includes *extraction* of policy implications from research results of other units in the Agency and elsewhere to increment our research capital oriented to and useful for policy analyses. A unique feature of the Program Area is the responsibility for maintaining an effective delivery system for the research products to the ultimate user clientele. While this responsibility involves making technical research results available to policymakers and their staff in the most usable form and by the most effective means, it also provides invaluable input to our research program to ensure continuing credibility and relevance.

The currently enlarged number of participants in the agricultural and food policy arena means that on any issue, proposals and positions of special interest groups are numerous. These groups are highly effective in getting their cases before the proper institutional bodies and it is the responsibility of APA as part of a public agency to ensure that the *objective economic case* receives due consideration.

## RESEARCH PROGRAM

Deciding upon the most appropriate mode of organization for a research program (e.g., around specific issues, problems, subject areas, or even models) is an enduring problem. We have recently reevaluated and reformulated our program with a five-year forward planning horizon, attempting to ensure continued relevance and timeliness of product. Our concerns had traditionally centered around "farm policies and programs" and the farming sector of the food and fiber system almost exclusively, i.e., coping with overproduction through supply controls to support product prices and producer incomes. The growing economic interdependence of all sectors of the domestic and international economies and the increased role of agriculture in the domestic economy have broadened the scope of information required for policy deliberations and decisions. Analyses of policy and program impacts on all affected participants (from the farmgate in all directions) of the economy are now routinely requested.

Our research program is aimed at providing the capability for analyzing a broad range of policy issues under alternative economic situations that might prevail in the future. While newly emerging issues will assume a variety of topical labels, they will usually be an outgrowth of or relate to concerns about the economic conditions of the time. Rather than trying to anticipate and study a few emerging issues, or focusing on any singular problem, or devoting our efforts to a single model, we are striving toward developing a growing analytical capability with continuing relevance.

The process of developing our research program included delineation of three possible broad future economic situations which may be descriptively characterized by the level and volatility of *farm and food prices*: (1) chronically low, (2) persistently unstable, and (3) chronically high. After identifying issues likely to be associated with each situation, the commonality of issues and research implications across the three situations was evaluated, resulting in the distillation of the broad research areas shown in Exhibit E. Specific projects in each of these areas form the core of our research program, which also includes integration of existing and emerging research results. Through this approach, we thus hope to obtain additivity of our knowledge base in these areas which traverse the food and fiber system.

We think that our Program is relevant and is what we ought to be doing, consistent with our charge and responsibility. We have used the input of a number of non-ERS economists in the process of formulating our program. To provide a structure for obtaining such future input, including a critique of our Program on an ongoing basis, we have plans to form a three person advisory committee of "outside" policy economists to regularly interact with us on our program and activities.

Capsuling the discussion, the role, research program, and activities of APA may be visualized in perspective by the illustration in Exhibit F. Development of an increasing capability (quality and breadth) to address broad policy issues includes integration of the commodity Program Area's research treating the food and fiber system, as well as that conducted in APA and elsewhere, into a coherent framework that enables additivity. This capability enables providing analyses of emerging issues (before requested) and staff analyses upon request in a thorough and timely manner to our immediate clientele and to the policy establishment.

#### RESEARCH TOOLS AND RESOURCES

Building and maintaining analytical capability also includes the several quantitative economic models which the Program Area maintains for rapid access, in addition to obtaining and assimilating results from other existing models in CED and ERS. These models utilize econometric, math programming, simulation, and other familiar methodologies. Some of the more frequently used models include:

POLYSIM--A national agricultural policy simulator written in computer language for evaluating the effects of alternative policies and economic stimuli on the food and fiber system. The design of the simulator incorporates an exogenously specified set of "baseline" projections (five years) and simulates effects of perturbations from the baseline on the major crop and livestock commodities tracing the effects through production, utilization, prices, farm income, and consumption expenditures. POLYSIM was developed jointly by APA and Oklahoma State University.

ACRE--A national and regional acreage supply response model for the major crops. A variety of techniques are incorporated into the regional and aggregate estimating framework, including the judgment of experienced "regional analysts."

Quadratic Programming Food and Fiber System Model--A model incorporating the input, production, and processing and distribution sectors in a quadratic goal programming framework. This model, when fully developed, will enable the determination of sectoral tradeoffs inherent in policies and programs in a net social welfare context.

STOCS--A Stochastic Wheat and Feed Grains Sectors Commodity Simulator. This model incorporates national supply and component demand functions in a stochastic framework. Its principal use has been in evaluating impacts of grain reserve proposals on the commodity sectors, domestic food provision and export markets, and in studying related price stabilization schemes.

Current Information System--A large body of professional literature, government reports and documents, and statistics related to agricultural and food policy is systematically maintained in the Program Area. This information is widely used in staff analyses and in responding to "Controlled Correspondence", of which APA handles over 600 pieces annually.

Communications--Interaction among members of the Program Area is enhanced by use of the FTS network, telecopiers for printed information exchange, and frequent travel.

External Relations--For a variety of reasons, agricultural and food policy research in the 1970's ebbed from the high level of the early and mid-1960's. Many of the institutions, conferences, and publications focusing on policy research and facilitating interaction among policy economists no longer exist. Only recently has interest renewed significantly in policy-related research.

Because of our unique position in the policy arena, we have undertaken to establish closer relationships with university and other economists in the policy area. We view this as serving a role somewhat similar to that envisioned by Shaffer "...that the Economic Research Service establish units or desks with responsibility for collecting, maintaining, coordinating, and integrating data and research findings for specific subsectors, industries, or functions."

Related to this function, the Program Area is making a concerted effort to broaden its interaction with other professionals (both in and out of Government) concerned with agricultural and food policy. Recently initiated activities include:

(1) Cosponsorship with the North Central Public Policy Research Task Force, the Farm Foundation, and the Western Agricultural Economics Research Council of the National Agricultural and Food Policy Research Workshop held in Washington, D.C., January 1976.

(2) Cooperative sponsorship of "Policy Research Notes," a newsletter designed to enhance communication among researchers in the policy area and now reaching over 300 economists. The policyworker list (basis for the mailing list) is being expanded and will soon total near 500.

(3) Preparation of an annual Agricultural and Food Policy Handbook to provide an accurate and current reference of existing agricultural and food policies in the U.S. The content is to include public policies of the legislative, executive, and administering (action) agencies of the Federal Government.

(4) Greater dissemination of the more substantive products of our staff and long-term research products through new publication series targeted specifically to a policy audience. We have recently instituted three new paper series, *Policy Background Papers*, *Policy Issue Papers*, and an *Agricultural Policy Review*. The background papers are to treat topics facilitating understanding of agricultural and food policies and programs; the issue papers will treat topical public policy issues; and the Review will be an occasionally issued periodical carrying compendia of papers on specific topics. The first issue of the Review, planned for late fall 1976, will treat issues related to replacement legislation for the expiring Agriculture and Consumer Protection Act of 1973. We hope to interest other ERS and university economists in contributing to these series.

(5) Sponsorship of a Policy Chair in APA for university economists (six-month to one-year terms) for interaction with ERS professionals and conduct of special policy-related projects.

## Personnel

The Program Area is composed of a staff of nineteen economists, a cost accountant, and ten permanent secretarial and technical support personnel (Exhibit G). (Additional full-time support employees for field locations are normally employed through cooperative agreements with universities). The staff is located, in addition to Washington, D.C., at four land-grant universities: Colorado State, Missouri, Oklahoma State, and Purdue. Through use of communication aids noted above and frequent travel, all members of the staff are fully integrated into the program area activities.

## ILLUSTRATIVE RECENT PRODUCTS

This listing below contains examples of recent (since July 1975) publications, staff reports, and professional and working papers illustrative of the products of the Program Area.

### Research Reports

*Reserve Stocks of Grain: A Review of Research*, AER 304, ERS, USDA, August 1975.

*Empirical Evaluation of Predictive Linear Programming*, NTIS Series, May 1976.

*Costs of Producing Food Grains, Feed Grains, Oil Crops, and Cotton, 1974-76*, AER 338, ERS, USDA, May 1976.

*Buffer Stock Management for Wheat Price Stabilization*, AER 341, ERS, USDA, July 1976.

### Journal Articles

"An Examination of Major Crop Acreage Response." *Southern Journal of Agricultural Economics*, Vol. 7, No.1, July 1975, pp. 55-61.

"POLYSIM: A National Agricultural Policy Simulator." *Agricultural Economics Research*, Vol. 28, No. 1, January 1976.

"Energy, Environment and the Structure of the Food and Fiber System." *American Journal of Agricultural Economics*, Vol. 57, No. 4, December 1975.

"Current Efforts at Estimation of Cost of Production in ERS," *American Journal of Agricultural Economics*, Vol. 57, No.5, December 1975.

"Modeling and Simulation of The U.S. Economy with Alternative Energy Availabilities," *American Journal of Agricultural Economics*, (forthcoming).

### Working Papers and Speeches

"Stocks Management for Wheat Price Stabilization." December 1975, 27pp.

"National Policy Alternatives for Food and Fiber Production and Consumption--an Analytical Framework." August 1975, 13pp.

"Government Participation in the U.S. Agricultural Sector, 1929-75." Policy Background Paper, May 1976, 56pp.

"The Target Price and Loan Rate Concepts for Agricultural Commodities." Policy Background Paper, June 1976, 14pp.

"An Evaluation of Land Reserves for Controlling Agricultural Production." Policy Issue Paper, April 1976, 26pp.

"Reserve Stocks of Grain: Context and Issues." Policy Issue Paper, June 1976, 30pp. (Forthcoming)

"A Prototype Quadratic Programming Model of the U.S. Food and Fiber System." April 1976, 39pp.

"The 1977 Food and Agriculture Act: The Issues, The Choices, The Determinants," Speech at Southern Extension Public Affairs Committee Annual Meeting, Richmond, Virginia, April 28, 1976.

"Food and Agriculture Public Policy Issues of the Future," June 1976, 29pp.

### Staff Reports

"An Analysis of the Enders International Grain Reserve Proposal." Prepared for the Department of State, August 22, 1975, 32pp.

"An Assessment of the Agriculture and Consumer Protection Act of 1973," February 1976, 30pp.

"An Analysis of the Impacts of Reversion to Basic Legislation Upon Expiration of the Agriculture and Consumer Protection Act of 1973," May 1976, 25pp.

"An Analysis of the Impacts of the 1975 Russian Grain Sales," January 1976, 4pp.

### Professional Meeting Papers

"Reserves for Feed Grains and Wheat in the World Grain Market." Presented to ORSA/TIMS Joint National Meetings, Conference on Systems Analyses of Grain Reserves, Philadelphia, Pa., March 31-April 2, 1976, 27pp.

"Simulation Analysis of Farm Programs with Grain Reserve Features." Presented to ORSA/TIMS Joint National Meetings, Conference on Systems Analyses of Grain Reserves, Philadelphia, Pa., March 31-April 2, 1976, 20pp.

"A Producer Price and Income Stabilization Program and Implications for Research." Presented to Policy Research Workshop, Washington, D.C., January 15-16, 1976, 18pp.

"Policy Research in the Commodity Economics Division of ERS," Presented to Policy Research Workshop, Washington, D.C., January 15-16, 1976, 14pp.

"Buffer Stock Management of U.S. Wheat in the World Grains Economy," presented to International Association of Agricultural Economists Meetings, Nairobi, Kenya, July 27-August 4, 1976, 12pp.

# U.S. DEPARTMENT OF AGRICULTURE

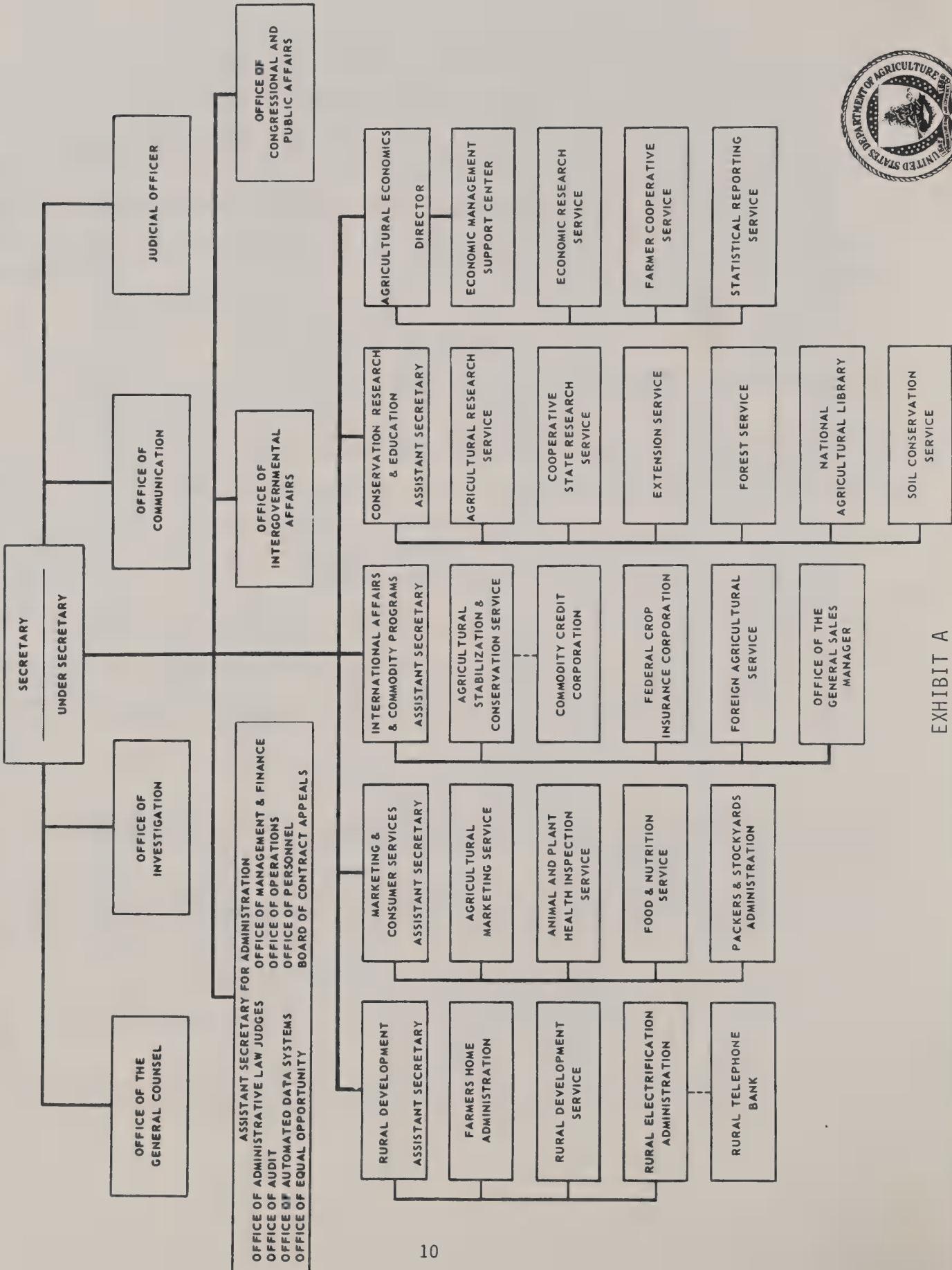
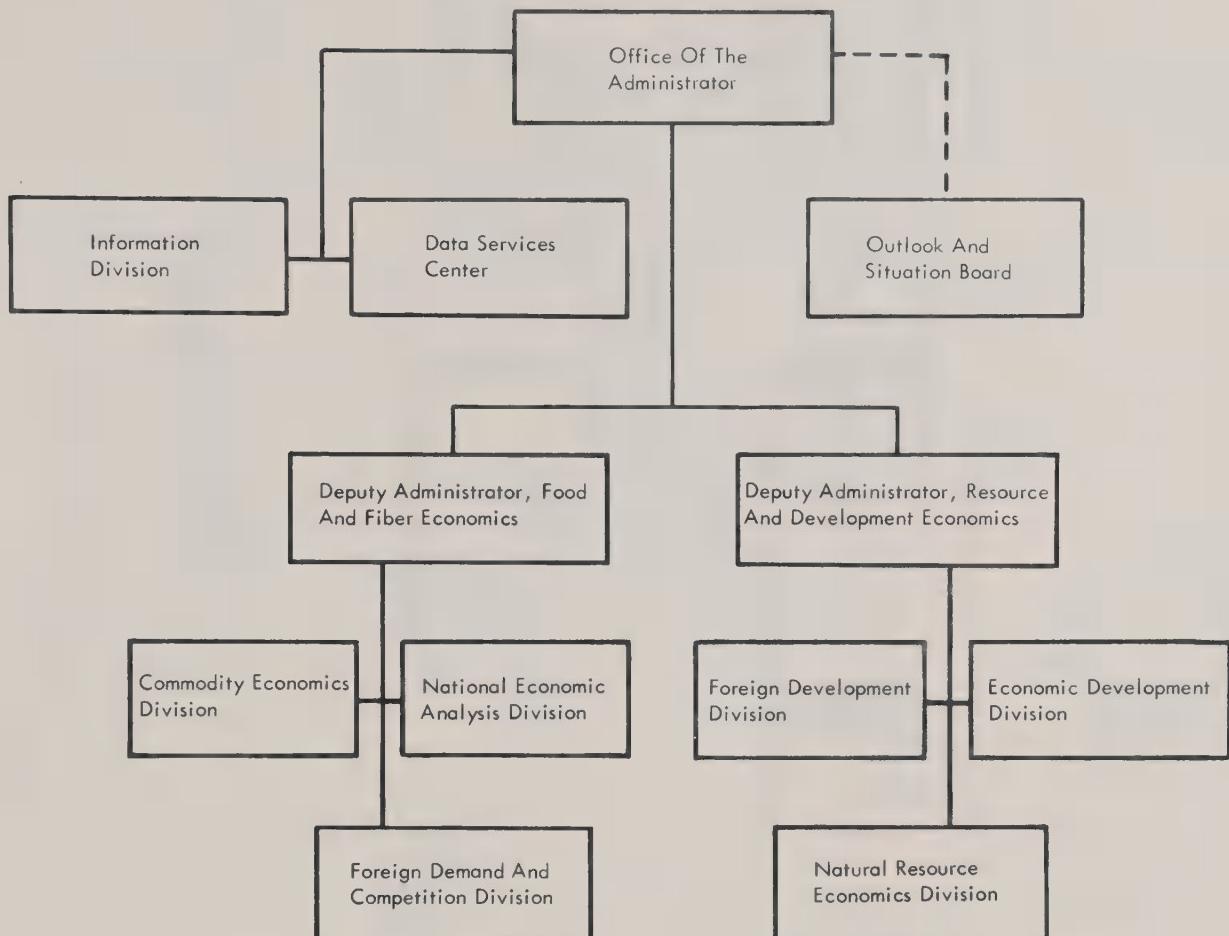


EXHIBIT A

# U.S. DEPARTMENT OF AGRICULTURE

## ECONOMIC RESEARCH SERVICE



The Service develops and carries out a program of economic research designed to provide economic intelligence for the Department of Agriculture and other Federal decision makers, farmers, and related industries, and the general public. The findings of this research are made available to these users through research reports and through economic outlook and situation reports on major commodities, the national economy and the international economy.

Exhibit B

## COMMODITY ECONOMICS DIVISION

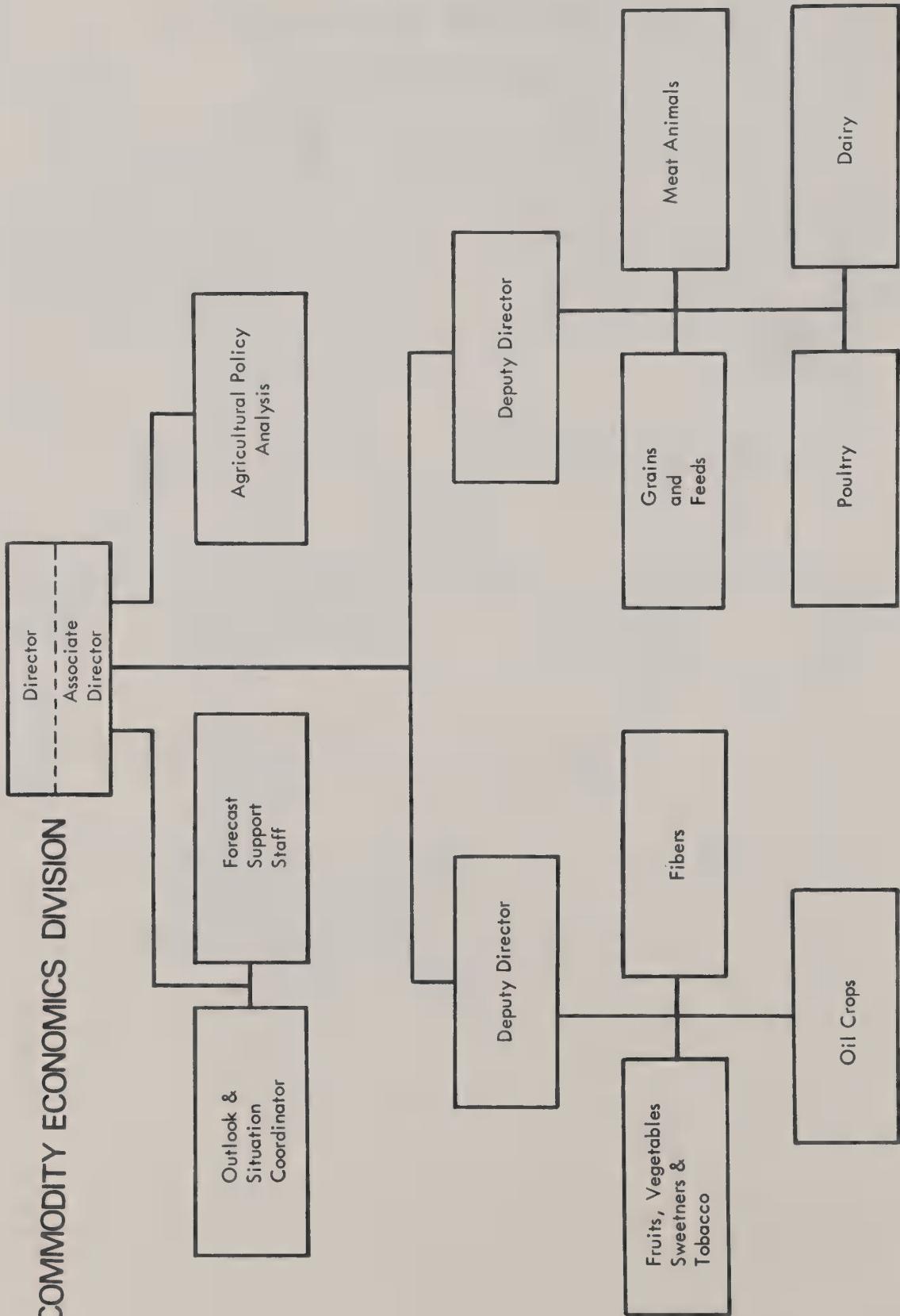
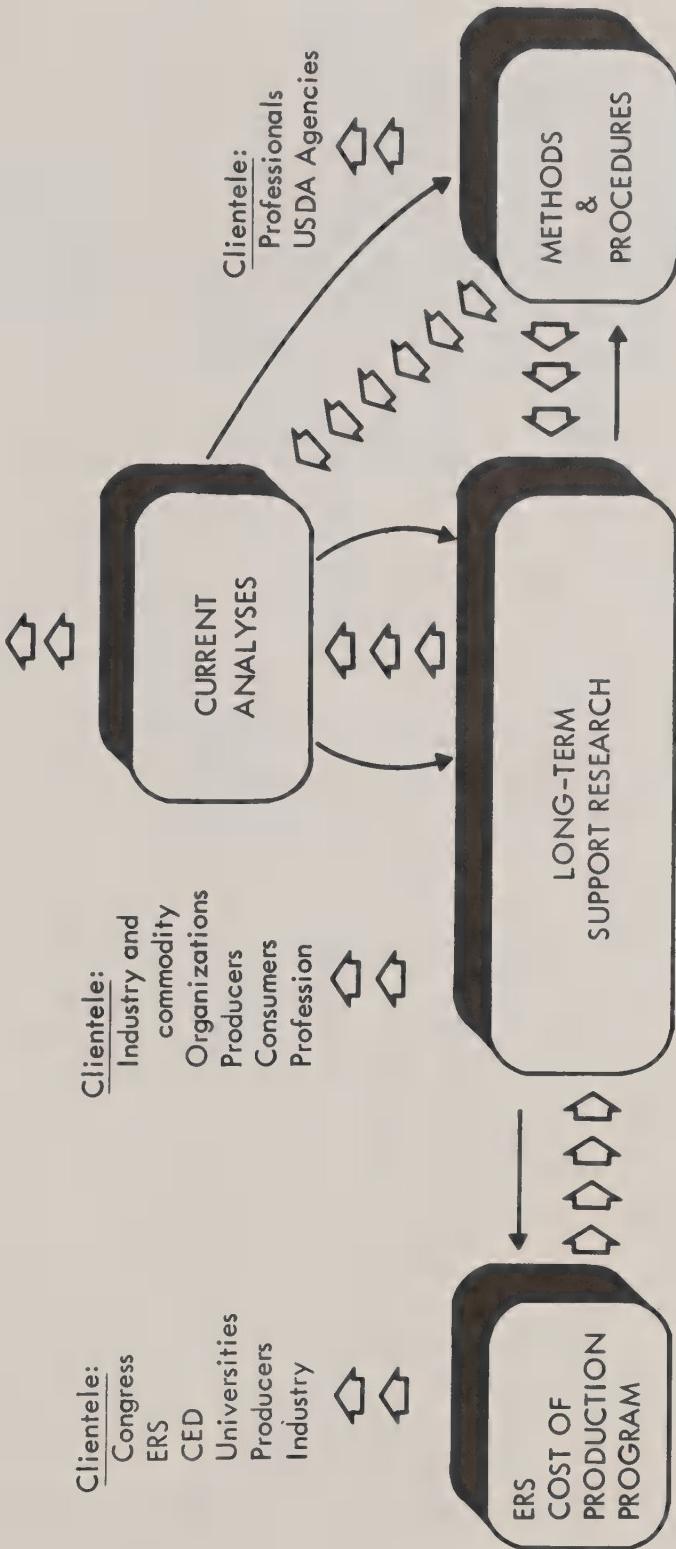


Exhibit C

## FUNCTIONAL ORGANIZATION OF APA

Clientele:  
Office of the Secretary of Agriculture  
Other USDA Agencies  
ERS  
Other Federal Agencies  
Council of Economic Advisors  
The Congress  
General Public

Clientele:  
Industry and commodity organizations  
Producers  
Consumers  
Profession  
Congress  
ERS  
CED  
Universities  
Producers  
Industry



Product Flow →  
Feedback influencing program content →

Exhibit D

EXHIBIT E

Possible Future Economic Situations

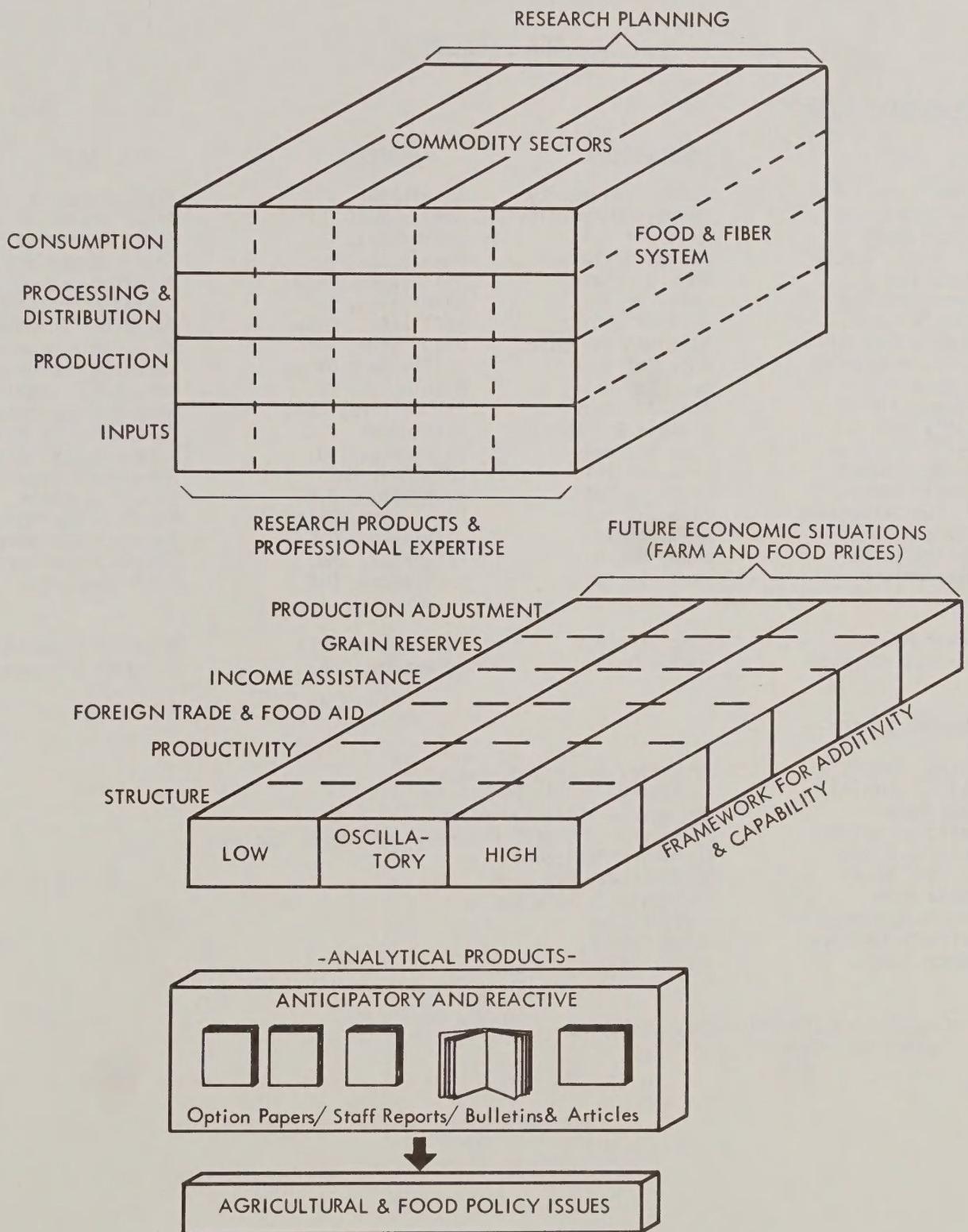
Low	Oscillatory	High
Chronic overproduction → chronically low farm and food prices	Intermittent shortages & surpluses → farm & food price instability	Chronic shortages → high farm & food prices

Economic Rationale For Government Intervention In The  
Food and Fiber System Economy

Relating to policies under all economic situations, who benefits, who bears the burden, and what is the net social gain.

<p><u>Production abatement:</u> supply control</p> <p><u>Surplus stocks:</u> disposal-demand expansion</p> <p><u>Farm income:</u> Supplements (direct payments) Payments-idling resources</p> <p><u>Demand expansion:</u> domestic- foreign-(food aid, concessional sales-PL480)</p> <p><u>Production capacity</u> maintained (efficiency) technology adoption</p> <p><u>Low rate of returns to</u> resources: further exodus and concentration of production units. Food system concentration</p>	<p><u>Production adjustment</u> Short-term production increases and decreases</p> <p><u>Grain reserves</u> Buffer stocks: price stability</p> <p><u>Income and assistance programs</u> Price stabilization mechanisms: Govt. intervention--Aid to producers and consumers</p> <p><u>Foreign trade and food aid</u> Stability of markets- foreign exchange earnings over time, long-term commodity agreements</p> <p><u>Agricultural productivity</u> Impacts of uncertainty on productive capacity development and maintenance capital investment</p> <p><u>Structure and performance</u> Development of new institutions to handle risk. Coordination, vertical integration, cooperatives' bargaining power</p>	<p><u>Production encouragement:</u> inducements</p> <p><u>Reserve Stocks:</u> contingency (natural disaster)</p> <p><u>Income transfers</u> to consumers: food stamps, direct transfers</p> <p><u>Level of exports</u> controls, embargos, BOP</p> <p><u>Production capacity</u> developments encouraged-- technology-- regulation natural factors</p> <p><u>Numbers and</u> sizes of farms bargaining power cooperatives food system concentration</p>
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EXHIBIT F



## EXHIBIT G

## APA PERSONNEL

Professional Staff

<u>Name</u>	<u>Last Degree</u>	<u>Location</u>	<u>Position</u>
J.B. Penn	Purdue University	Washington, D.C.	Program Leader
Herbert Brown	Harvard University	Washington, D.C.	Staff Economist
Cecil Davison	Univ. of Ill.	Washington, D.C.	Staff Economist
Milton Ericksen	Kansas State Univ.	Washington, D.C.	Staff Economist
Gale Garst	Col. St. Univ.	Stillwater, Okla.	Research Economist
James Johnson	Univ. of Ill.	Washington, D.C.	Research Economist
Ronald Krenz	Iowa St. Univ.	Stillwater, Okla.	Research Economist
Ronald Meekhof	Michigan St. Univ.	Washington, D.C.	Research Economist
Charles Micheel	Univ. of Nebr.	Stillwater, Okla.	Research Economist
Ronald Miller	Col. St. Univ.	Washington, D.C.	Research Economist
Thomas Miller	Iowa St. Univ.	Ft. Collins, Col.	Research Economist
LeRoy Rude	Montana St. Univ.	Washington, D.C.	Research Economist
Jerry Sharples	Iowa St. Univ.	Lafayette, Ind.	Research Economist
Rudie Slaughter	Univ. of Ill.	Columbia, Mo.	Research Economist
Ludwin Speir	Univ. of Tenn.	Washington, D.C.	Cost Accountant
P. Leo Strickland	Okla. St. Univ.	Stillwater, Okla.	Research Economist
Thomas Stucker	Univ. of Ill.	Washington, D.C.	Research Economist
Rodney Walker	Okla. St. Univ.	Lafayette, Ind.	Research Economist
Alan Walter	Wash. St. Univ.	Washington, D.C.	Staff Economist
David Fawcett*	Ohio St. Univ.	Stillwater, Okla.	Research Economist
Forrest Holland*	Purdue Univ.	Lafayette, Ind.	Research Economist

Support Staff

Rachel Overcash	Secretary to Program Leader
Sylvia Leonard	Secretary, Staff Economists
Mary Meyer	Secretary, Staff Economists
Georgian Zollman	Secretary, Research Program, Lafayette, Indiana
Valerie Apollo	Economics Assistant
Dorothy Nolan	Statistical Assistant
Wanda Wade	Statistical Assistant
Sheila Carpenter+	Clerk Typist
Marianne Gaffey+	Clerk Typist
Sharon Lynch+	Junior Fellow

\* Cooperative ERS-University employees

+ Summer employees



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